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10/573,002	03/20/2006	Tatsuo Yokoi	187577/US-465122-00022	4548

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DORSEY & WHITNEY LLP
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EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,002

Applicant(s)

YOKOI ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20060320, 20061204.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: IDS 20070907.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 11-14, in the reply filed on 24 August 2007 is acknowledged.
2. The requirement is still deemed proper and is therefore made FINAL.
3. Claims 15-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 24 August 2007.

Claim Objections

4. Claim 14 is objected to because of the following informalities: Regarding Claim 14, line 2, the word "port" is an incorrect spelling of "portion". Appropriate correction is required.

Specification

5. The Substitute Specification filed on 20 March 2006 has been entered.
6. The amendment in the form of the Substitute Specification filed 20 March 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The submitted Substitute Specification may seek to add new matter. For example, applicant's change of "necessary" language to "preferable" language at, for example, paragraph 42,

and at other locations and change of "required" language to "preferable" language at, for example, paragraph 43, and at other locations are not provided any justification. These changes impact the scope of coverage of the claims that is enabled.

7. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:
9. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
10. Claims 11-14 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for hard phase comprised of martensite or bainite, does not reasonably provide enablement for any hard phase. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. At page 10, paragraph 2, of the Specification, applicant explains that the hard phase is necessarily martensite or bainite phase for applicant's invention. Applicant has not described how sheets of other hard phases meeting this claimed structural requirement can be identified and produced.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

12. A person shall be entitled to a patent unless –
13. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
14. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoi et al. USPA 2002/0179193. Yokoi et al. teaches a steel slab of the claimed composition, wherein the slab is comprised of ferrite and hard phase in the claimed volumetric ratio, hardness ratio, and grain size ratio. See Yokoi et al. (Abstract; paragraphs 14-44, 58, and 66-93; and Table 1, including steel P). Yokoi et al. does not characterize the ferrite phase as being polygonal, but the ferrite phase meets the claim physical properties, and there is no apparent evidence that such material would be other than polygonal ferrite.
15. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. JP 2002-180193. Kobayashi et al. teaches a steel slab of the claimed composition, wherein the slab is comprised of polygonal ferrite and hard phase in the claimed volumetric ratio, hardness ratio, and grain size ratio. See Kobayashi et al. (Abstract; entire document; and Tables 1 and 3, particularly Steel H).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yokoi et al. USPA 2002/0179193. Yokoi et al. teaches a steel slab of the claimed composition, wherein the slab is comprised of ferrite and hard phase in the claimed volumetric ratio, hardness ratio, and grain size ratio. See Yokoi et al. (Abstract; paragraphs 14-44, 58, and 66-93; and Table 1, including steel P).

Yokoi et al. does not characterize the ferrite phase as being polygonal, but the ferrite phase meets the claim physical properties, and there is no apparent evidence that such material would be other than polygonal ferrite. In the event that Yokoi et al. cannot be said to exemplify steels having the claimed physical property ratios, Yokoi et al. discloses ranges for each of the parameters that determine each of these ratios that are effective. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the materials of Yokoi et al. throughout the suggested ranges in Yokoi et al. In those suggested articles, it would be expected that steels having the claimed physical property ratios would be included. Yokoi et al. may not exemplify steel having the claimed composition with REM, but teaches that effective alloys may include

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REM. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the materials of Yokoi et al. with REM as Yokoi et al. suggests that effective materials may be made in this manner. Yokoi et al. may not teach providing a zinc layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to galvanize the steel sheet of Yokoi et al. in order to confer a protecting galvanizing layer to that sheet to shield against environmental corrosion.

19. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 2002-180193. Kobayashi et al. teaches a steel slab of the claimed composition, wherein the slab is comprised of polygonal ferrite and hard phase in the claimed volumetric ratio, hardness ratio, and grain size ratio. See Kobayashi et al. (Abstract; entire document; and Tables 1 and 3, particularly Steel H). Kobayashi et al. may not exemplify steel having the claimed composition with REM, but teaches that effective alloys may include REM. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the materials of Kobayashi et al. with REM as Kobayashi et al. suggests that effective materials may be made in this manner. Kobayashi et al. may not teach providing a zinc layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to galvanize the steel sheet of Kobayashi et al. in order to confer a protecting galvanizing layer to that sheet to shield against environmental corrosion.

20. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. JP 2002-180193 in view of Yokoi et al. USPA 2002/0179193. Kobayashi et al. teaches a steel slab of the claimed composition, wherein the slab is comprised of polygonal ferrite and hard phase in the claimed volumetric ratio, hardness ratio, and grain size ratio. See Kobayashi et al. (Abstract; entire document; and Tables 1 and 3, particularly Steel H). Kobayashi et al. may not exemplify steel having the claimed composition with the ingredients of Claim 12. Yokoi et al. teaches that the ingredients of Claim 12 are effective alloying ingredients in steel compositions suitable for automobile manufacturing. See Yokoi et al. (paragraphs 33-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to include these small amounts of alloying ingredients in the steels of Kobayashi et al. in order to confer superior physical properties on those steels in order to render them more suitable for automobile manufacturing applications.

Conclusion


21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
27 September 2007


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER